

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2001-158464

(43)Date of publication of application : 12.06.2001

(51)Int.Cl.

B65D 47/42  
A45D 34/04  
B05C 17/005  
B65D 83/00

(21)Application number : 11-339603

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(22)Date of filing : 30.11.1999

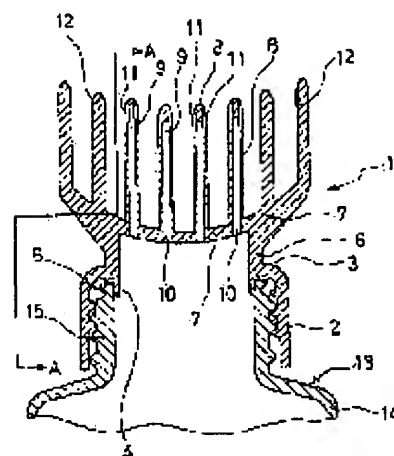
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## (54) CAP WITH COMB

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide an integral formation of a cap having a comb comprised of some comb pieces having pouring-out ports therein and both sides frame comb pieces improving safety characteristic as well as flowing-out characteristic, improving sanitary state and outer appearance and further reducing its manufacturing cost.

**SOLUTION:** There is provided a cap having a comb integrally molded by a synthetic resin. Each of comb pieces 8 has a discharging hole 9 opened in a lateral direction at its upper end. There is provided a die-punched vertical groove 11 having at least the same groove width as that of the opening lateral width of the discharging hole 9 from the discharging hole 9 to its upper end. A discharging passage 10 is passed and formed from the discharging hole 9 to the lower end surface of the top plate 7.



- |             |          |          |
|-------------|----------|----------|
| 1 : 樹脂製キャップ | 2 : 組付口縁 | 3 : 頂部   |
| 4 : シール面材   | 6 : シール片 | 8 : 側面材  |
| 7 : 頂板      | 9 : 吐出孔  | 10 : 吐出路 |
| 11 : 吐出溝    | 12 : 側板  | 13 : 側面材 |
| 14 : 底面材    | 15 : 側板  | 16 : 側面材 |

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- 3.In the drawings, any words are not translated.

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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[The technical field to which an invention belongs] This invention relates to the cap with a comb which constituted on the hair the content fluid stored by the bottle object, such as hair dye liquid and hair manicure, from a bottle object that it should apply directly.

[0002]

[Description of the Prior Art]As a cap with a comb which is attached to the bottle object which has squeeze nature as a cap, and enabled it to apply directly content fluid, such as hair dye liquid of a bottle object, and hair manicure, to the hair, The thing of composition of having \*\*\*\*\*(ed) each piece of a ctenidium to the lengthwise direction is proposed to the thing of composition of having made each piece of a ctenidium of the comb functional division located in the conventional upper bed of a bottle object project in a transverse direction.

[0003]Since the comb functional division which a ctenidium object forms is the composition of being located right above a bottle object with the posture in which each piece of a ctenidium was raised, the above-mentioned conventional cap with a comb, Even if it is a hair portion which cannot carry out metaphor viewing, by tactile feeling of a hand with a bottle object a comb functional division, Can attain that it is good and easily spreading into the hair portion which making it counter properly [ it is reasonable and ] can attain into the target hair portion easily, it has in it, and is made into the purpose of content fluid, and. Since the pour way which is a supply route of the content fluid to each piece of a ctenidium which constitutes a comb functional division will be in the state where it arranged along rectangular directions to the derivation direction of the content fluid from a bottle object, It is "collecting" before each pour way. It has an advantage of \*\* which can distribute content fluid by an equivalent pour pressure to each pour way, can make uniform quantity of the content fluid which has and is poured out between each piece of a ctenidium, and can obtain spreading of the good content fluid which does not have spreading unevenness to the hair only by forming a portion.

[0004]By the way, the cap with a comb of this conventional technology, the mouth tube part of a bottle object which has squeeze nature is clinched densely — it grappling and to the upper bed of a pipe. To the top plating which carries out standing-up successive formation of the standing-up pipe flat forward and backward via an inner brim-like top wall, and closes the upper bed of this standing-up pipe. The cap body which established two or more attachment holes penetrated up and down at equal intervals in series to the longitudinal direction, and set up the piece of a frame ctenidium from the both the right and left ends of top plating further, On the undersurface of the base plate laid on the top plating of this cap body, \*\*\*\*\* the piece of an attachment pipe which carries out tight-fitting ON to the class attachment hole of a cap body firmly separately, and. \*\*\*\*\* the piece of a ctenidium in the base plate upper surface part right above each of this piece of an attachment pipe, and in the class doubling portion of this piece of a ctenidium, and the piece of an attachment pipe, It

applies to the lower end surface of the piece of an attachment pipe from the upper bed part of the piece of a ctenidium, and the ctenidium object in which the pour way which carried out the opening of the bung hole to the upper bed part left and right laterals of the piece of a ctenidium was formed, and \*\*\*\*\* and these two bodies are attached, and it is constituted.

[0005] Thus, in order that the content fluid poured out from the bung hole of each piece of a ctenidium may prevent dispersing to the side (longitudinal direction) of a comb functional division at the time [ reason / which is made into 2 body structures ] of use, are making the piece of a frame ctenidium of both the right and left ends into structure without a hole, but. thus, the piece of a ctenidium which has a hole (bung hole) and the piece of a frame ctenidium without the hole located in the both sides -- a hole -- since it is difficult, carrying out integral moulding using the shaping pin for shaping fabricated independently the ctenidium object provided with the piece of a ctenidium, and the cap body provided with the piece of a frame ctenidium, respectively, and it has attached to one.

[0006]

[Problem(s) to be Solved by the Invention] However, if it was in the above-mentioned conventional technology, when the crevice was formed between the cap body and ctenidium object which were combined, there was a problem which says that content fluid may invade into a crevice and washing may become troublesome.

[0007] When the boundary line portion (boundary line) of a cap body and a ctenidium object could be seen, there was a problem which says that there is a possibility that vanity may worsen.

[0008] And for the composition which attaches a ctenidium object to a cap body when an inside attaches the piece of an attachment pipe which forms a part of pour way and inserts in a hole, Expansion of the cross-section area of said pour way for improving pour mobility being regulated, therefore making a pour way large, and improving pour mobility had a problem referred to as receiving restrictions.

[0009] Since each forming mold of a cap body and a ctenidium object was needed and the independent attachment work with a cap body and a ctenidium object was also needed, there was a problem which says that a manufacturing cost becomes high.

[0010] Then, this invention is what was originated that the problem in the above-mentioned conventional technology should be canceled, It aims at making into a technical technical problem to carry out integral moulding of the cap with a comb provided with the piece of a ctenidium which has a bung hole, and the piece of a frame ctenidium of the both sides, having it, obtaining a good using feeling and high pour mobility, and raising a sanitary aspect and appearance and carrying out reduction of the manufacturing cost.

[0011]

[Means for Solving the Problem] A means of the invention according to claim 1 among this inventions which solve the above-mentioned technical technical problem, a mouth tube part of a bottle object which has squeeze nature is clinched densely -- it grappling and to an upper bed of a pipe. Set up a piece of the ctenidium of plurality [ regular intervals ] in-series to a longitudinal direction to central slippage of the upper surface of top plating which carried out standing-up successive formation of the standing-up pipe flat forward and backward via an inner brim-like top wall, and was formed successively by upper bed of this standing-up pipe, and. To setting up a piece of a frame ctenidium to a both-sides end part of this top plating, and each piece of a ctenidium. Moreover install a pouring hole which carries out an opening to an end in a longitudinal direction, and penetration formation of the pour way is carried out from this pouring hole to the undersurface of top plating, It is in a right-and-left portion furthermore applied to an upper bed from a pouring hole, without providing a mold omission fluting which has a flute width equal to opening breadth of a pouring hole at least, and carrying out integral moulding with a synthetic resin material.

[0012] Without keeping being in a transverse direction and requiring a pin as some metallic molds, since it is the composition of having a mold omission fluting, each piece of a ctenidium of a cap with

a comb can fabricate a pouring hole, and, thereby, it becomes easy structure of a metallic mold and to handling operate it.

[0013] Since the whole is fabricated by one and neither a joint nor a crevice is formed, appearance improves, content fluid does not collect on a joint or a crevice, therefore the pour mobility of content fluid increases, and the cap with a comb can also perform washing easily.

[0014] Since it is integral construction, even if it makes a pour way of a piece of a ctenidium large, a cap with a comb is attached like structure before, generating of liquid leakage in a portion fears it, and there is and it can improve pour mobility easily. [ no ]

[0015] Since the forming mold is also a thing of a lot and ends, since a cap with a comb is integral construction, and it becomes unnecessary [ a process of attaching members forming ], reduction of the manufacturing cost is carried out substantially.

[0016] The invention according to claim 2 adds what a tip of each piece of a ctenidium and a piece of a frame ctenidium has been arranged for to the invention according to claim 1 in accordance with a curvature radius beforehand set up based on a curvature radius on the surface of a human head.

[0017] If it is in this invention according to claim 2, at the time of use of a cap with a comb a tip of each piece of a ctenidium, and a piece of a frame ctenidium, Since the human head surface can be made to be able to contact abbreviated coincidence, and a good contact state over the human head surface of each piece of a ctenidium and a piece of a frame ctenidium can be acquired by this and physical relationship of each piece of a ctenidium to the human head surface fixed-izes, an application state of content fluid to the hair will be fixed.

[0018]

[Embodiment of the Invention] Hereafter, the example of this invention is described, referring to drawings. A figure is what showed the first example of this invention, and the cap 1 with a comb in which integral moulding was carried out by injection molding of the synthetic resin material in the whole is attached to the bottle object 13 which set up and constituted the mouth tube part 15 in the upper bed of the drum section 14 which has squeeze nature.

[0019] In the undersurface of the top wall 3 which carries out exterior screwing and which grappled and were formed successively by the upper bed of the pipe 2 in the shape of an inner brim, at the mouth tube part 15 of the bottle object 13 with a group [ as opposed to the mouth tube part 15 of the cap 1 with a comb by forming seal \*\* 5 which contacts elastically densely in the short cylinder-shaped seal cylinder piece 4 which carries out tight-fitting ON to the opening of the mouth tube part 15, and a mouth tube part 15 upper-bed side ] -- liquid -- he is trying to attain densely

[0020] On the upper surface of the top wall 3, set up the standing-up pipe 6 flat forward and backward, and the four pieces 8 of a ctenidium are set up at equal intervals in series in a longitudinal direction to central slippage of the upper surface of the top plating 7 formed successively by the upper bed of this standing-up pipe 6, and the two pieces 12 each of a frame ctenidium are set up in series by the both-sides end part of the top plating 7.

[0021] The pouring hole 9 which carries out an opening is installed through the longitudinal direction at that upper bed part, and the pour way 10 penetrated from this pouring hole 9 to the lower end surface of the top plating 7 is established by each piece 8 of a ctenidium.

[0022] The mold omission fluting 11 of the flute width equal to the opening breadth of the pouring hole 9 at least is formed in the portion applied to an upper bed from the pouring hole 9 of each piece 8 of a ctenidium, i.e., the right-and-left portion of the upper bed part of each piece 8 of a ctenidium, in the shape of an engraving.

[0023] This mold omission fluting 11 is for making the mold release from the mold portion which combines with the mold pin which fabricates the pour way 10, and fabricates the pouring hole 9 attain.

[0024] Thus, it will release from mold from the mold portion which the mold omission fluting 11 combines with a mold pin, and fabricates the pouring hole 9, namely, this mold portion will form the passage through which it can pass up relatively.

[0025] So, the bottom will be located inside the road surface of the pour way 10 as the mold omission fluting 11 of having a flute width equal to the opening breadth of the pouring hole 9 as it is small being natural.

[0026] Drawing 4 is a sectional view showing the case where the cross-section area of the pour way 10 in the piece 8 of a ctenidium is enlarged so that it may improve the pour mobility of content fluid.

[0027] It is not necessary to provide attachment cost in piece of ctenidium 8 side portions, and since it is an integral-moulding thing, as the part and a solid line show, it becomes possible to form the pour way 10 of the cross-sectional-length circle configuration expanded to the thick limit that the intensity of the piece 8 of a ctenidium is held.

[0028]

[Effect of the Invention] Since this invention has the above-mentioned composition, it does so the effect taken below. Since the whole is fabricated by one and neither a joint nor a crevice is formed, the cap with a comb, Since appearance improves, and content fluid does not collect, it has, the pour mobility of content fluid increases, and spreading on the hair can be attained smoothly and good and washing can also be attained easily, a sanitary aspect also improves.

[0029] Since it is integral construction, by making the pour way of the piece of a ctenidium large, the cap with a comb is attached like structure before, the liquid leakage in a portion, etc. fear it, and there is and it can improve pour mobility easily. [ no ]

[0030] Since the forming mold is also a thing of a lot and ends, since the cap with a comb is integral construction, and it becomes unnecessary [ the process of attaching members forming ], reduction of the manufacturing cost is carried out substantially.

[0031] Without requiring a horizontal omission pin, although the pouring hole which carried out the opening to right and left is fabricated, since some metallic molds which carry out a mold opening up and down are used, structure of the metallic mold to be used can be made easy, and the handling is easy.

[0032] If it is in the invention according to claim 2, a very good using feeling can be obtained, and the content fluid to the hair can be fixed and uniform spreading can be obtained easily.

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[Translation done.]